- 1 : new / old ssd simulation code
- 2 : Efficiency after ladders tilt correction
- 3 : Residuals with geometry from Geant

Unification/clean-up of the code

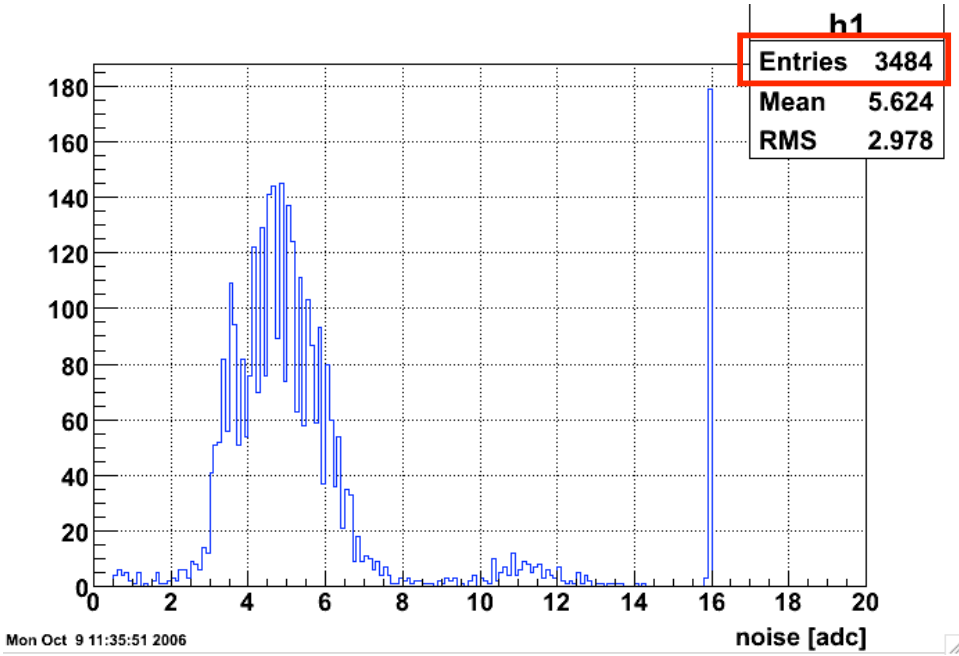
Simulation		Hit reconstruction
Sls	**Spa**	**Ssd**
SlsStrip	*SpaStrip*	*SsdStrip*
SlsBarrel	*SpaBarrel*	*SsdBarrel*
SlsWafer	*SpaWafer*	*SsdWafer*

- Differents classes but share methods with same functionnalities
- Now same makers but only 1 class Ssd
- Methods put in StSsdUtil

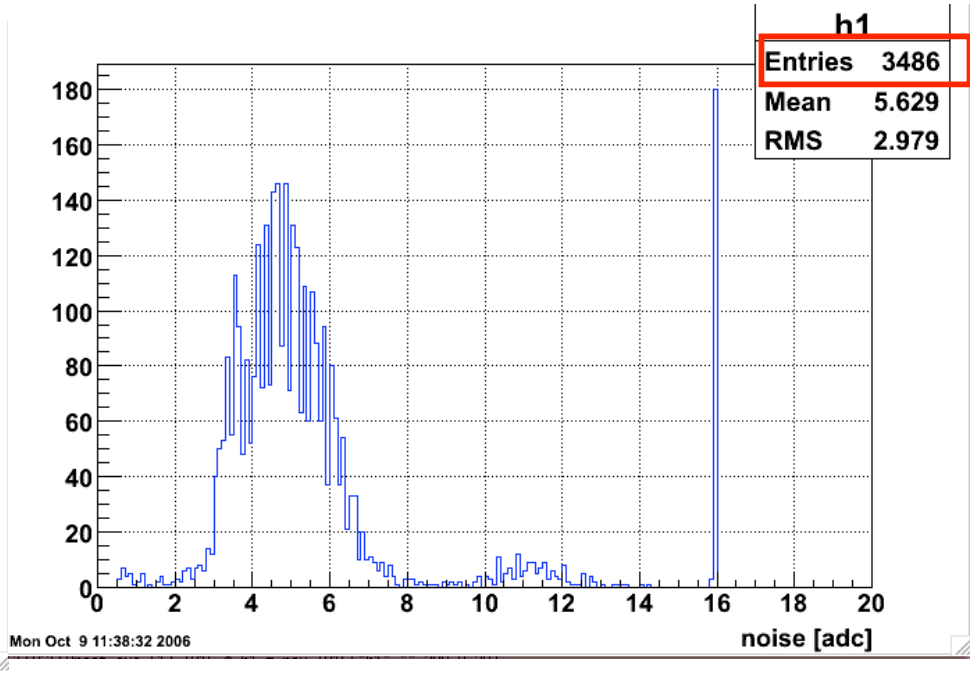
- Comparison old / new code for :
  - Simulation files
  - Real data files
  - Pedestal files (because the pointMaker is used to generate the ssdStripCalib (pedestal and noise)

Noise (sideN) simulation

Old makers



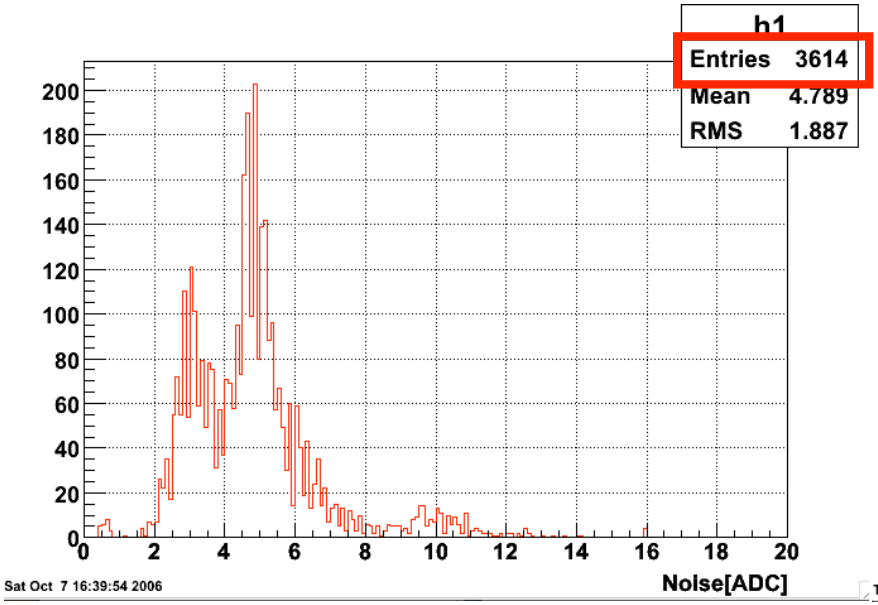
New makers



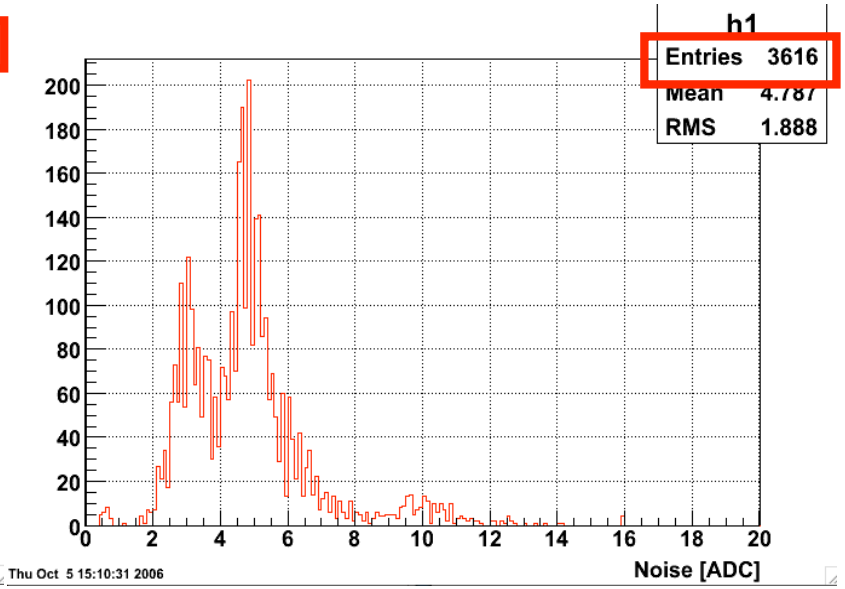
- Very small difference between the 2 methods

Noise (sideP) simulation

Old makers

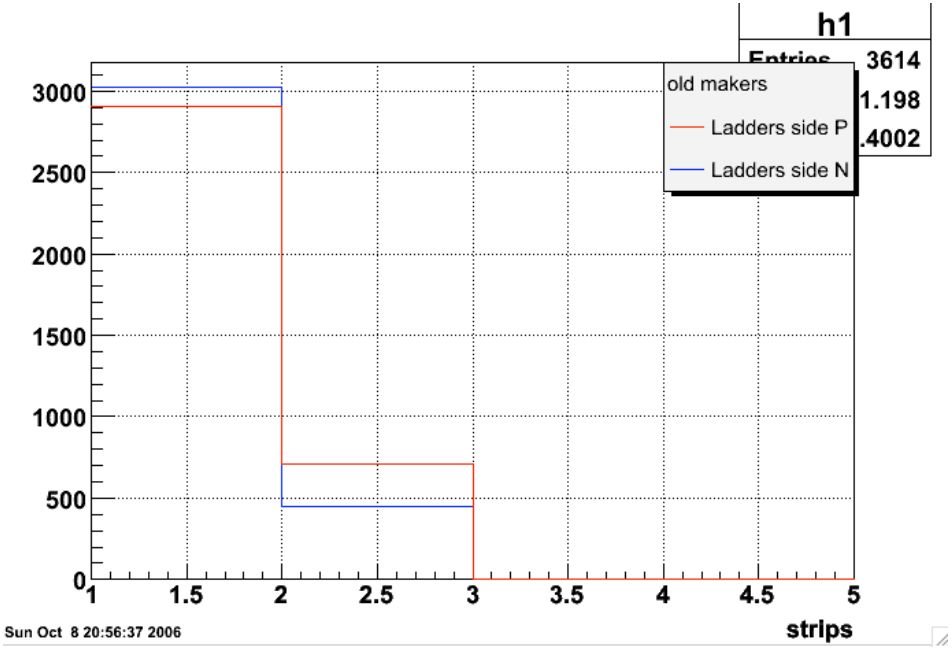


New makers

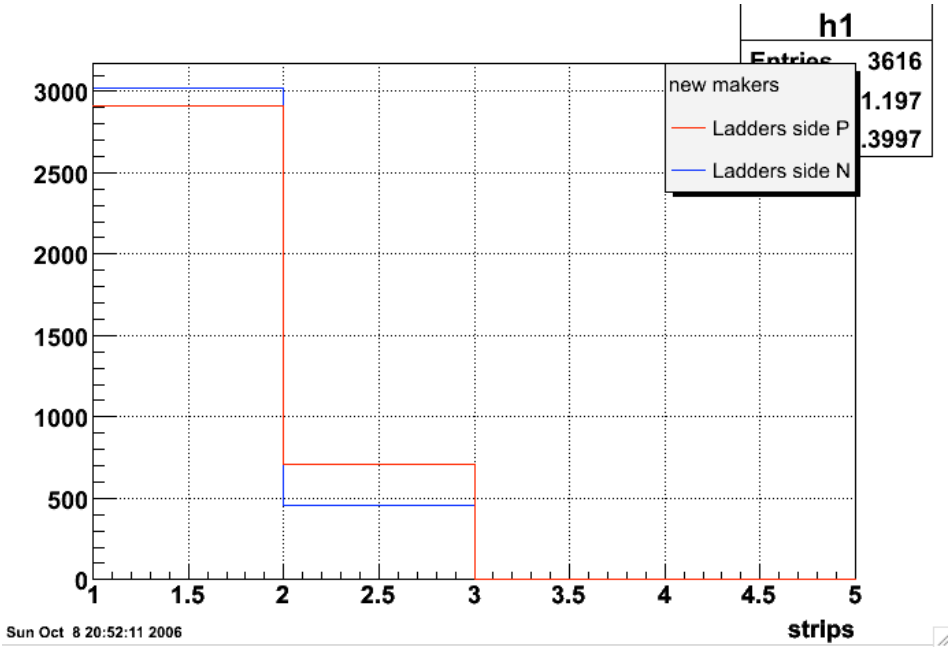


Clusters size simulation

Old makers

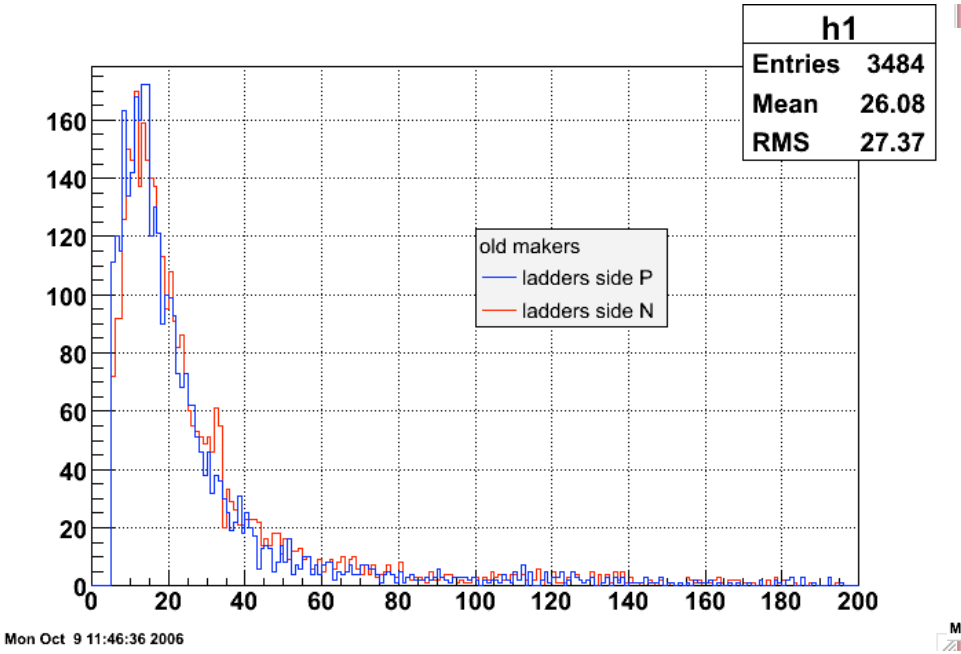


New makers

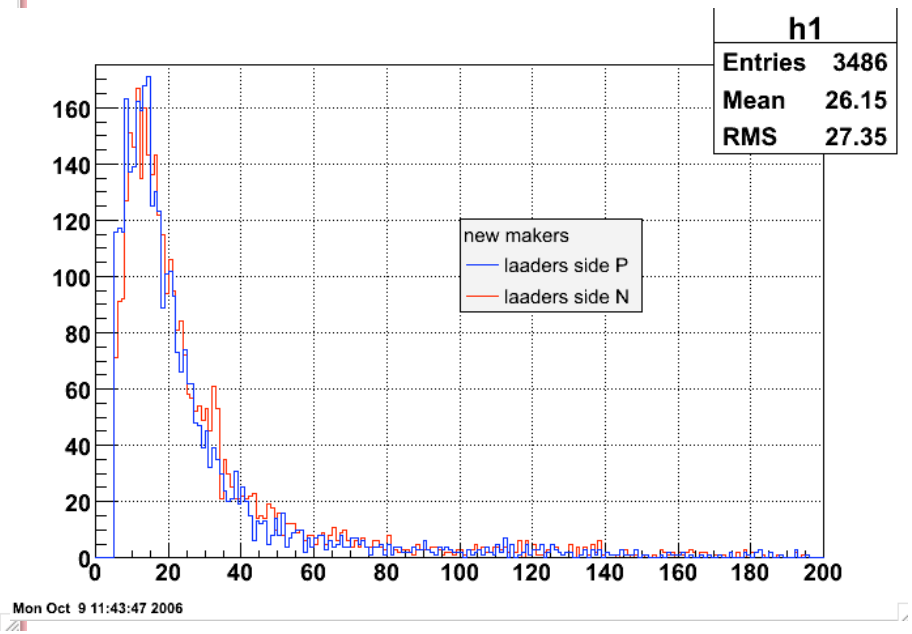


S/n ratio simulation

Old makers

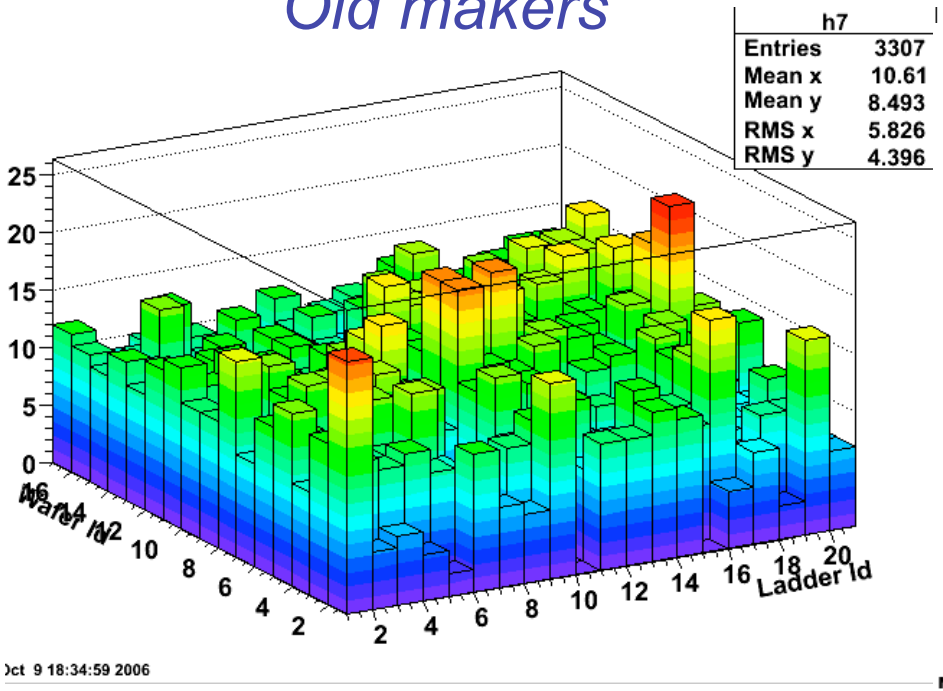


New makers

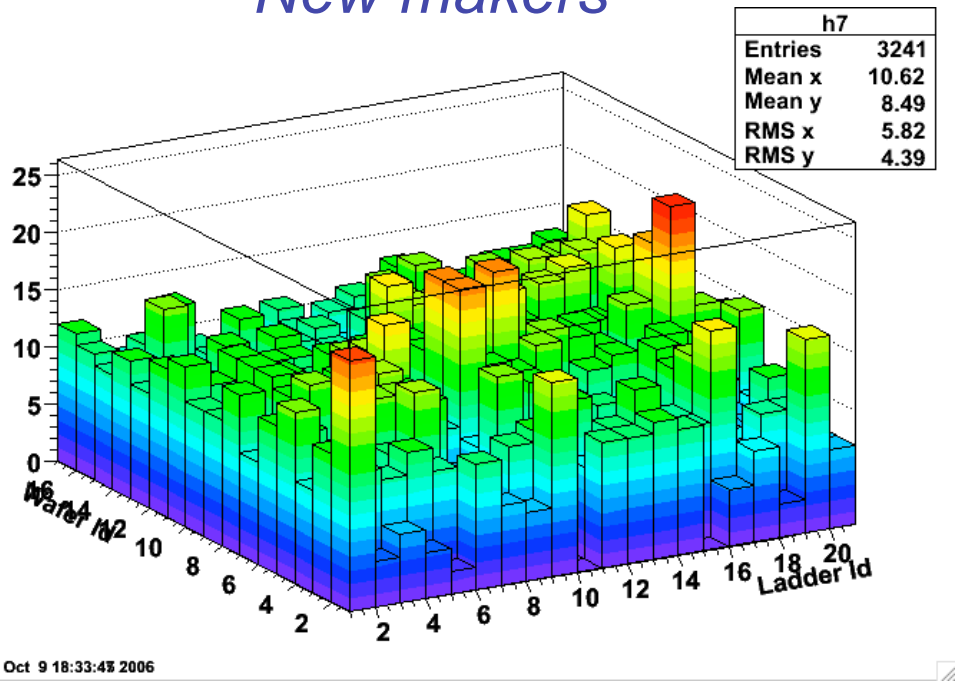


Hits reco. (Ladder vs wafer)

Old makers



New makers



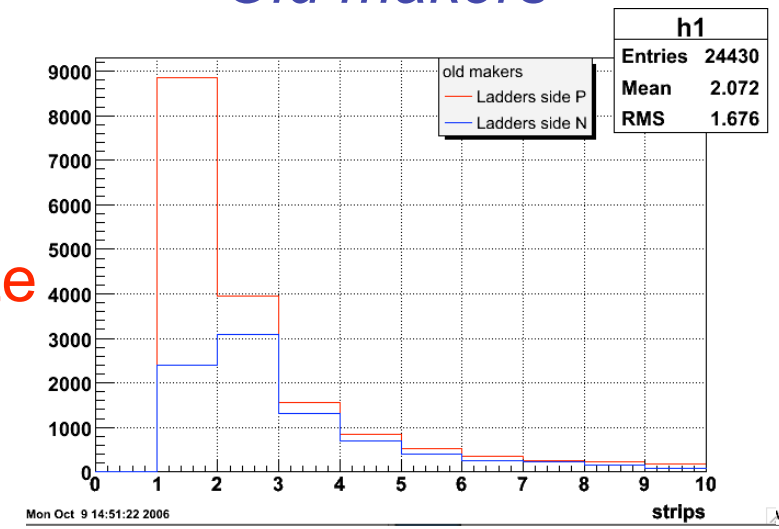
- Loss of 2% of the number of reconstructed hits with the new method
- Need to be understand (in progress)

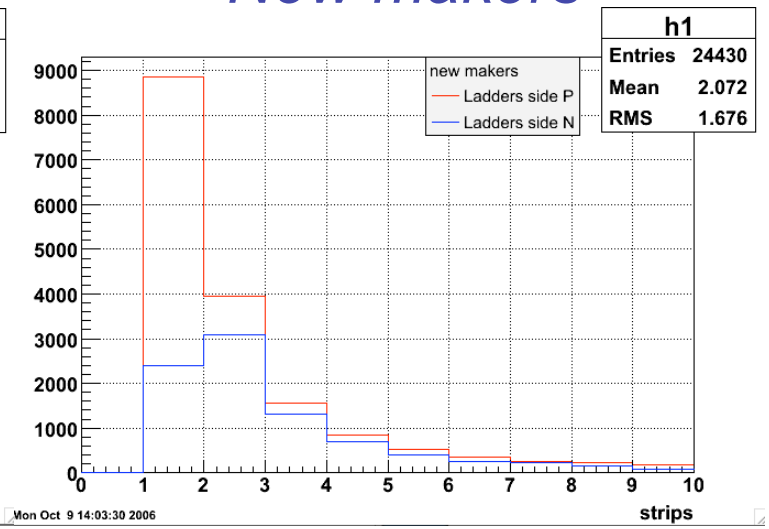
Comparison with the real data

Old makers

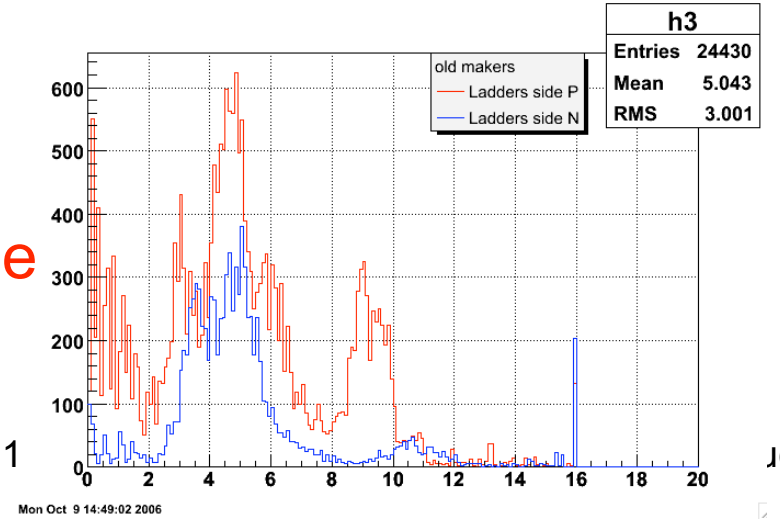
New makers

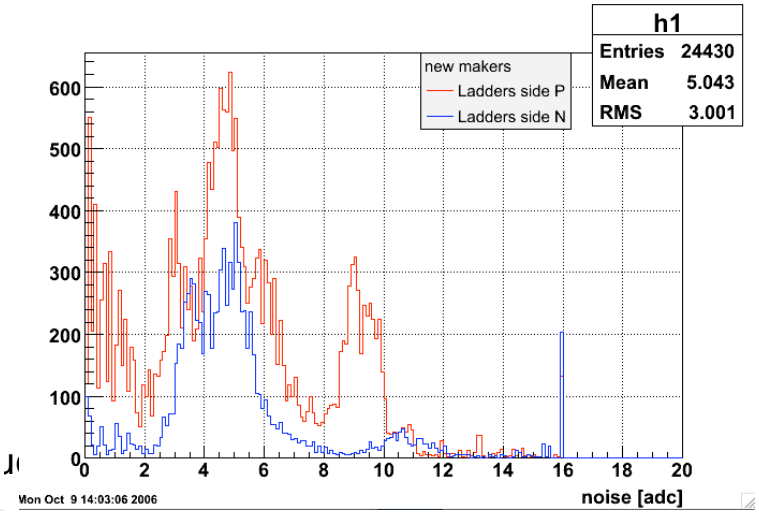
Size





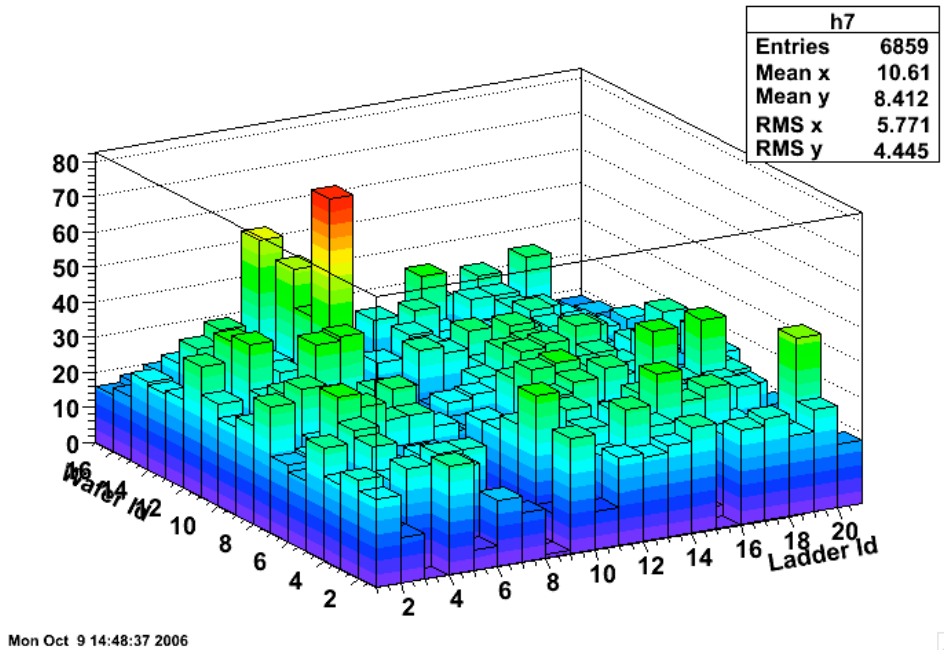
Noise



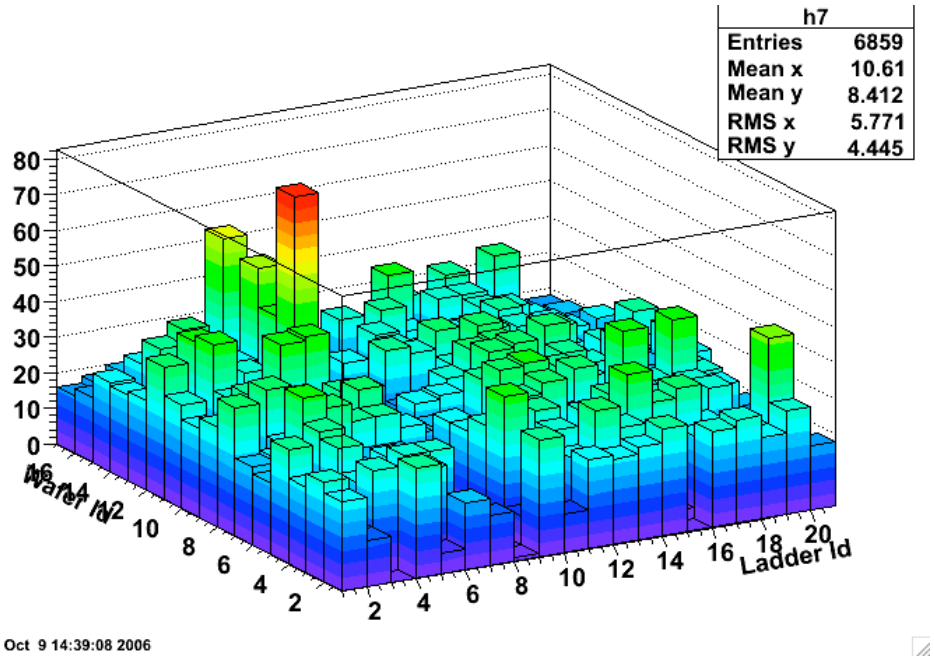


Hits (Ladders vs wafers)

Old makers



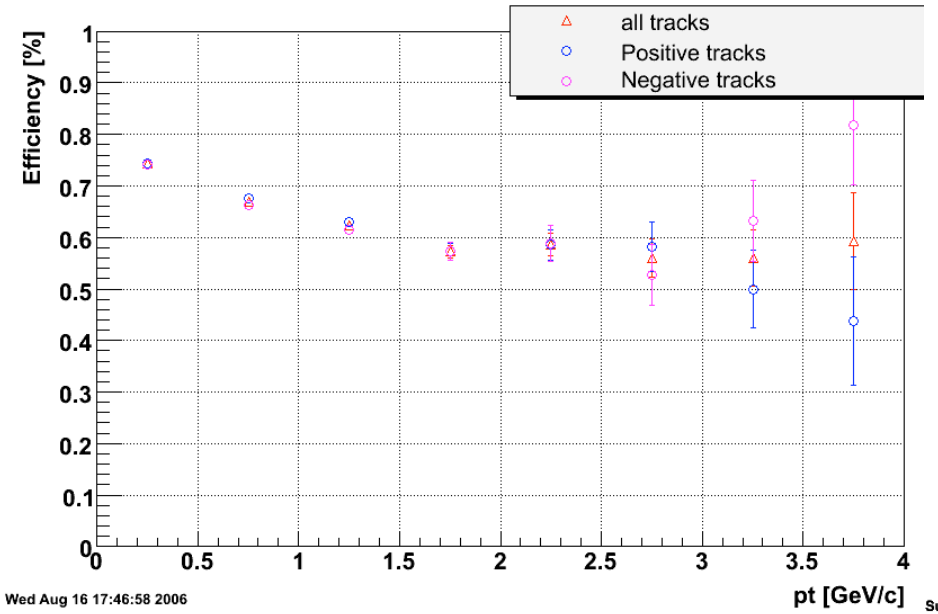
New makers

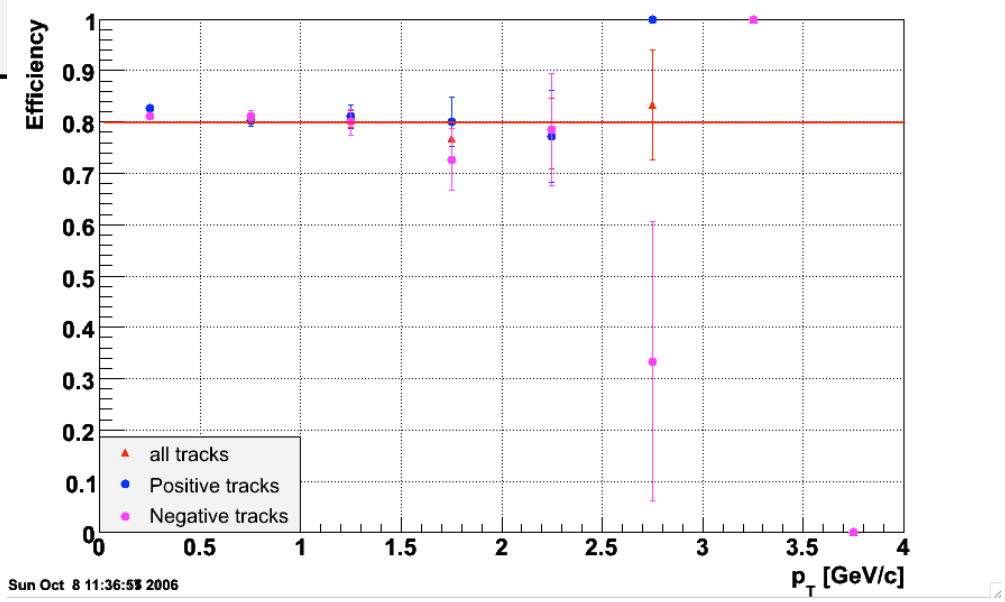


- Same number of hits

Tilt correction

simulation



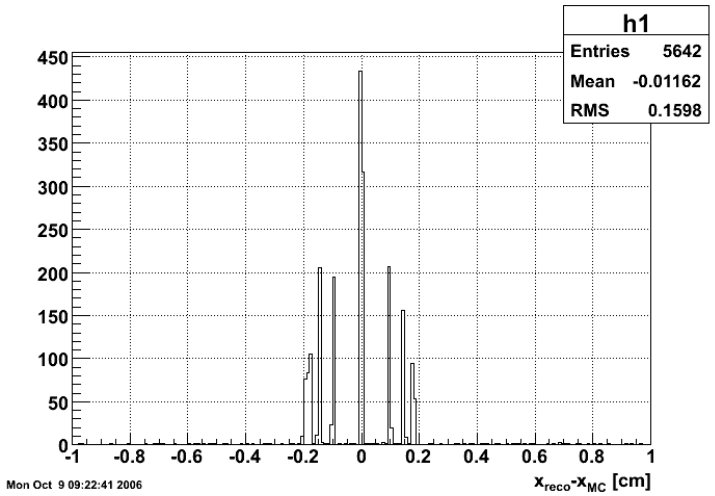


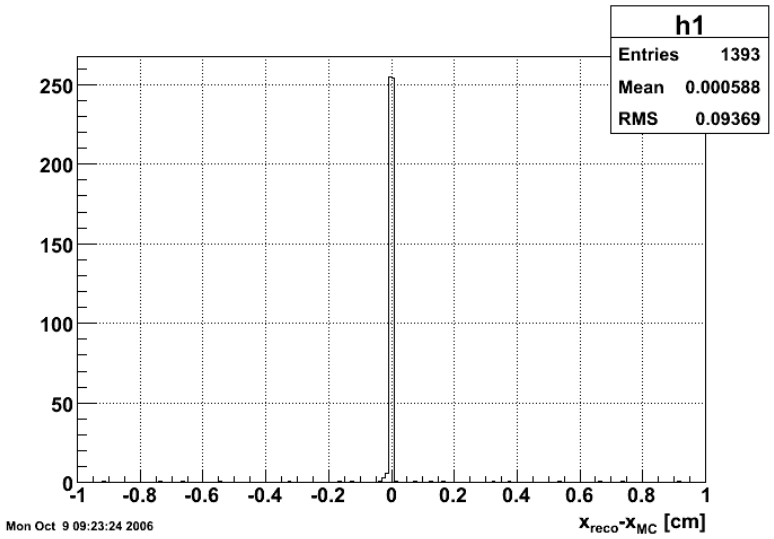
Without Ladders tilt correction

With Ladders tilt correction

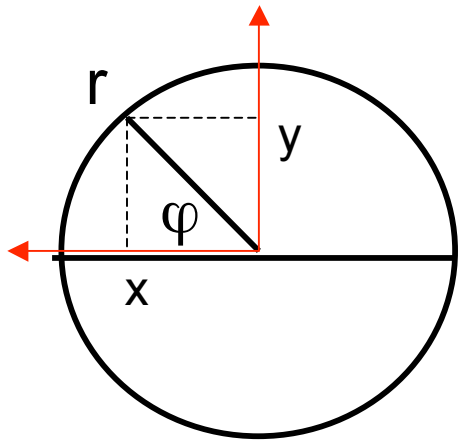
Efficiency ~ 80 %

Residuals






```
Fill SFPA                ! Silicon Strip detector parameters
  version   = 5            ! geometry version
  ladderMap    = {     1,      1,      1,      1,      1,
                       1,      1,      1,      1,      1,
                       1,      1,      1,      1,      1,
                       1,      1,      1,      1,      1} ! presence of ladders
  ladderAngle = {  90.0, 108.3, 126.6, 144.4, 162.2,
                  180.0, 197.8, 215.6, 233.4, 251.7,
                  270.0, 288.3, 306.6, 324.4, 342.2,
                    0.0,  17.8,  35.6,  53.4,  71.7} ! individual angles
  ladderTilt   = {   0.0,  -6.0,  -7.0,  -7.0,  -7.0,
                     0.0,   7.0,   7.0,   7.0,   6.0,
                     0.0,  -6.0,  -7.0,  -7.0,  -7.0,
                     0.0,   7.0,   7.0,   7.0,   6.0} ! individual tilts
  ladderRadius= {23.177,22.800,22.600,22.600,22.600,
                 22.300,22.600,22.600,22.600,22.800,
                 23.177,22.800,22.600,22.600,22.600,
                 22.500,22.600,22.600,22.600,22.800} ! individual radii
```



Summary

- 2 Methods give approximately the same results
- Need to fix the problem for the loss of the hits with the simulation files
- Then commit to cvs
- Next step : mixer
- See the effects of the change of the geometry and the tilt correction on real data